

Case Study #14

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The following series of slides document the results of using Redux EF40L fluxes at 15 International Foundries to eliminate slag buildup on refractory walls of coreless induction furnaces, extend refractory life and clean ladles. Additional details on increases in refractory life are presently not available because of the COVID-19 pandemic.

By
Forace Polymers / ASI
International Ltd

**Case Study 14 - Objective: Clean slag
build-up from Coreless Induction
furnace walls and extend lining life**



**Field Trial of REDUX EF40L in a 1.5 Metric Ton
Coreless Induction Furnace at
International Foundry "N" pouring Grey and Ductile Iron**



Trial details at Foundry “N”

Trial Time – 10.30 am to 12.00pm

Furnace capacity – 500 Kilograms (#3 furnace)

Metal Type – S.G Iron

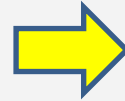
Furnace type – Coreless medium frequency induction furnace

Furnace lining material – Silica lining (Daka)

Heat Number after lining – 53



Observations Before the Redux Trial at Foundry “N”



Liquid slag is generated and accumulates on the melt surface leading to slag build-up on upper lining walls



Trial details

Trial Details

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graph LR; A[Trial Details] --- B[REDUX EL40L addition – 0.05% (250 g. for 500 kg liquid metal)]; A --- C[Tapping temperature 1550°C]
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REDUX EL40L addition –
0.05% (250 g. for 500 kg
liquid metal)

Tapping temperature
1550°C



SUMMARY OF FOUNDRY “M” TRIAL



Condition of the empty furnace after just one Redux application

- Foundry “N” feedback of Redux trial was positive and based on furnace photographs
- During trial, Foundry “N” didn’t have to increase tapping temperature above 1550°C to reduce slag build-up, thus saving electrical costs.

